CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method comprising:

receiving a first quantization value for a first macroblock;

determining a second quantization value for the first macroblock based on the first quantization value, [[and]]an expected amount of video data in a video buffer, and a product value of a X scaling value and a Y scaling value, wherein the product value is raised to a power of Z where Z is less than one.

2. (Previously Presented) The method of claim 1, further comprising modifying the first macroblock based on the second quantization value.

3. (Original) The method of claim 1, wherein the first quantization value is received from a source of the first macroblock.

4. (Previously Presented) The method of claim 1, wherein an address location of the video buffer represents the expected amount of video data in the video buffer.

5. (Previously Presented) The method of claim 1, wherein a buffer delay value indicating when a frame is to be processed represents the expected amount of video data in the video buffer.

6. (Original) The method of claim 5, wherein the buffer delay value is based on a number of frames stored in a buffer location of the video buffer.

7. (Previously Presented) The method of claim 1, wherein the expected amount of video data is determined based on a modeling of the video buffer.

8. (Previously Presented) The method of claim 7, wherein the modeling of the video buffer includes determining a fullness of the video buffer based on a difference between an input rate and an output rate.

9. (Original) The method of claim 7, wherein modeling of the video buffer includes using a VBV buffer model.

10. (Previously Presented) The method of claim 1, wherein determining further includes determining the second quantization value based on a first ratio of an input bit rate to an output bit rate.

11. (Previously Presented) The method of claim 10, wherein determining further includes determining the second quantization value based on a second ratio of the first ratio to a source bit count.

12. (Canceled)

13. (Currently Amended) The method of ~~claim 12~~claim 1, wherein the X scaling value includes a horizontal frame size value and the Y scaling value includes a vertical frame size value.

14. (Original) The method of claim 13, wherein Z is .75 +/- 0.1.

15. (Original) The method of claim 1, wherein the second quantization value includes a ratio value of the first quantization value to a quantization ratio.

16. (Previously Presented) The method of claim 15, wherein the quantization ratio is based on the expected amount of video data.

17. (Previously Presented) The method of claim 16, wherein:

the quantization ratio includes a first constant value when the expected amount of video data is greater than a first indicator;

the quantization ratio includes a second constant value when the expected amount of video data is less than the first indicator and greater than a second indicator; and

the quantization ratio is determined from a non-linear function when the expected amount of video data is less than the second indicator.

18. (Original) The method of claim 17, wherein the first indicator is a buffer fullness value of 75% +/- 1% of a maximum buffer fullness.

19. (Original) The method of claim 17, wherein the second indicator is a buffer fullness value of 20% +/- 1% of a maximum buffer fullness.

20. (Previously Presented) The method of claim 17, wherein the non-linear function includes an equation:

$$R = Q * X^{(Y-W)/Z}$$

where R is the quantization ratio, Q is an initial quantization ratio, X is a first constant value, Y is a second constant value, W is a value representing the expected amount of video data, and Z is a third constant value.

21. (Previously Presented) A method comprising:

modifying a quantization value for a first macroblock by a first constant value when an amount of data stored in a buffer is greater than a first indicator;

modifying the quantization value for the first macroblock by a second constant value when the amount of data stored in the buffer is greater than a second indicator and less than the first indicator; and

modifying the quantization value for the first macroblock by a non-linear value when the amount of data stored in the buffer is less than the second indicator.

22. – 50. (Canceled)

51. (Currently Amended) A computer program stored in a computer readable medium, the computer program comprising instructions to manipulate a processor to:

receive a first quantization value for a first macroblock;

determine a second quantization value for the first macroblock based on the first quantization value, [[and a]]an expected amount of video data in a video buffer, and a product value of a X scaling value and a Y scaling value, wherein the product value is raised to a power of Z where Z is less than one.

52. (Previously Presented) The computer program of claim 51, wherein said instructions further include instructions to manipulate said processor to modify the first macroblock based on the second quantization value.

53. (Previously Presented) The computer program of claim 51, wherein the first quantization value is received from a source of the first macroblock.

54. (Previously Presented) The computer program of claim 51, wherein an address location of the video buffer represents the expected amount of video data in the video buffer.

55. (Previously Presented) The computer program of claim 51, wherein a buffer delay value indicating when a frame is to be processed represents the expected amount of video data in the video buffer.

56. (Previously Presented) The computer program of claim 55, wherein the buffer delay value is based on a number of frames stored in a buffer location of the video buffer.

57. (Previously Presented) The computer program of claim 51, wherein the expected amount of video data is determined based on a modeling of the video buffer.

58. (Previously Presented) The computer program of claim 57, wherein the modeling of the video buffer includes using a VBV buffer model.

59. (Previously Presented) The computer program of claim 57, wherein the modeling of the video buffer includes determining a fullness of the video buffer based on a difference between an input rate and an output rate.

60. (Canceled)

61. (Canceled)

62. (Canceled)

63. (Currently Amended) The computer program of ~~claim 62~~claim 51, wherein the X scaling value includes a horizontal frame size value and the Y scaling value includes a vertical frame size value.

64. (Previously Presented) The computer program of claim 63, wherein Z is .75 +/- 0.1.

65. (Previously Presented) The computer program of claim 51, wherein the second quantization value includes a ratio value of the first quantization value to a quantization ratio.

66. (Currently Amended) The computer program of claim 65, wherein the quantization ratio is based on the expected amount of video data.

67. (Previously Presented) The computer program of claim 66, wherein:

the quantization ratio includes a first constant value when the expected amount of video data is greater than a first indicator;

the quantization ratio includes a second constant value when the expected amount of video data is less than the first indicator and greater than a second indicator; and

the quantization ratio is determined from a non-linear function when the expected amount of video data is less than the second indicator.

68. (Previously Presented) The computer program of claim 67, wherein the first indicator is a buffer fullness value of 75% +/- 1% of a maximum buffer fullness.

69. (Previously Presented) The computer program of claim 67, wherein the second indicator is a buffer fullness value of 20% +/- 1% of a maximum buffer fullness.

70. (Previously Presented) The computer program of claim 67, wherein the non-linear function includes an equation:

$$R = Q * X^{(Y-W)/Z}$$

where R is the quantization ratio, Q is an initial quantization ratio, X is a first constant value, Y is a second constant value, W is a value representing the expected amount of video data, and Z is a third constant value.

71. – 78. (Not Entered)

79. (New) A method comprising:

receiving a first quantization value for a first macroblock;

determining a second quantization value for the first macroblock based on the first quantization value and an expected amount of video data in a video buffer; and

wherein the first quantization value is received from a source of the first macroblock.

80. (New) A method comprising:

receiving a first quantization value for a first macroblock;

determining a second quantization value for the first macroblock based on the first quantization value and an expected amount of video data in a video buffer; and

wherein the expected amount of video data is determined based on a modeling of the video buffer.

81. (New) The method of claim 80, wherein the modeling of the video buffer includes determining a fullness of the video buffer based on a difference between an input rate and an output rate.

81. (New) The method of claim 80, wherein modeling of the video buffer includes using a VBV buffer model.

82. (New) A computer program stored in a computer readable medium, the computer program comprising instructions to manipulate a processor to:

receive a first quantization value for a first macroblock;

determine a second quantization value for the first macroblock based on the first quantization value and a expected amount of video data in a video buffer; and

wherein the expected amount of video data is determined based on a modeling of the video buffer.

83. (New) The computer program of claim 82, wherein the modeling of the video buffer includes using a VBV buffer model.

84. (New) The computer program of claim 82, wherein the modeling of the video buffer includes determining a fullness of the video buffer based on a difference between an input rate and an output rate.